

**\*97230\***

Page 1

**\*N900040100\***

Setup Start \*NS1\*

Stop \*NS2\*

**Start Date:** 2/13/13      **Start Qty:** 2.00

\*2\*

**Cust Item ID:**

**Required Date:** 2/26/13      **Req'd Qty:** 2.00

\*2\*

**Customer:**

**Reference:**

Approvals: Process Plan: MLJ

Date: 13-02-15 Tooling:

Date:

Run Start \*NR1\*

**QC:**

Date:

**SPC (Y/N):**

Date:

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
DSI9578	A
IIN-D119-696	A

9.8  
 DAS  
 27  
 11-13-76

100

\*100\*

DC

Document Control

DOCUMENT CONTROL

## Memo

Photocopy bluefile &amp; type labels per PPP D119-696-013

**DAS**  
**27**  
**9-89**

B 9 24

0.00

0.00

CHG006

110

**\*110\***

### Packaging

## Packaging

## Pick Kit

## Packaging

## Memo

0.00

0.00

1

DA 13-09-17

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data <input type="checkbox"/>									
Equip/Tooling <input type="checkbox"/>									
Operator <input type="checkbox"/>									
Material <input type="checkbox"/>									
Setup <input type="checkbox"/>									
Other <input type="checkbox"/>									
Process <input type="checkbox"/>									
Supplier <input type="checkbox"/>									
Training <input type="checkbox"/>									
Unapproved <input type="checkbox"/>									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions
---	---	---

<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other	
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# Work Order ID 97230

February-14-13 1:12:54 PM

**\*97230\***

Page 2

Item ID: D119-696-013

Accept

**\*N9000040100\***

Setup Start

**\*NS1\***

Revision ID:

Stop

**\*NS2\***

Item Name: Dual Cargo Mirror Installation

Start Date: 2/13/13 Start Qty: 2.00

**\*2\***

Cust Item ID:

Required Date: 2/26/13 Req'd Qty: 2.00

**\*2\***

Customer:

Reference:

Run Start

**\*NR1\***

Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop

**\*NR2\***

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

120

QC4- 100% Inspect kits for completeness

0.00

**\*120\***

DAS  
27  
9-89

QC

Memo

0.00

Quality Control

B929

2

130

Packaging

0.00

**\*130\***

Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPP D119-696-013

Location: 6010

PPP Rev: \_\_\_\_\_

2 8 13-9-24

140

QC21- Final Inspection - Work Order Release

0.00

**\*140\***

QC

Memo

0.00

Quality Control

MLJ 13-09-26

MLJ 13-09-26

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____				<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		<b>AGAINST DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											

FAULT CATEGORY			
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other

# Picklist Print

February-14-13 10:54:12 AM

Page 1

Work Order ID: 97230

Parent Item: D119-696-013

Parent Item Name: Dual Cargo Mirror Installation

Start Date: 2/13/13

Required Date: 2/26/13

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP Rev:A 08-02-19 New issue DD verified by: LL IPP REV:B 11.01.19 AS PER  
CHG005 DD VERF:EC IPP REV:C 11.11.14 AS PER CHG006 DD VERF:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
ALS4-1032-130		Purchased	No			110	Each	9,394.0000	2	122763	33	DA 33	06
Insert	ALS 7-1032-130												

Location Loc Qty Loc Code

FP001	389	
119084	116	
120671	89	
120807	36	
120837	8	
121269	140	
ST279	2318	
124080	2318	
st510	6687	
124163	6687	

AN526-1032R9

Screw

DAS  
27  
9-89

Purchased

No

110 Each 95.0000

Location Loc Qty Loc Code

ST328	95	
123831	95	

DAS  
27  
9-89

NAS1149D0363J

Purchased

No

110 Each 0.0000

AN960JD10

Washer

DAS  
27  
9-89

Manufactured

No

110 Each 0.0000

D119-696-043

Dual Cargo Mirror Assy, 6 inch Round

D2053

Mounting Bracket

DAS  
27  
9-89

Manufactured

No

110 Each 27.0000

Location Loc Qty Loc Code

ST004	27	
79466	4	
89271	23	

89271

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data <input type="checkbox"/>									
Equip/Tooling <input type="checkbox"/>									
Operator <input type="checkbox"/>									
Material <input type="checkbox"/>									
Setup <input type="checkbox"/>									
Other <input type="checkbox"/>									
Process <input type="checkbox"/>									
Supplier <input type="checkbox"/>									
Training <input type="checkbox"/>									
Unapproved <input type="checkbox"/>									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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# Picklist Print

February-14-13 10:54:12 AM

Page 2

Work Order ID: 97230

Parent Item: D119-696-013

Parent Item Name: Dual Cargo Mirror Installation

Start Date: 2/13/13

Required Date: 2/26/13

Start Qty: 2.00

Required Qty: 2.00

**D2067** Connector Manufactured No

DAS  
27  
9-89

27

Location

ST004

85517

110 Each 24.0000

Loc Qty

24

24

Loc Code

1

2

DAS  
33  
9-89

DAS  
106  
9-89

**D2071** Cable Assembly Manufactured No

Location

FG

71206

ST222

74112

94638

110 Each 22.0000

Loc Qty

2

2

20

5

15

Loc Code

1

2

85517  
95829  
33  
9-89

DAS  
106  
9-89

**D3083-1** Placard Manufactured No

DAS  
27  
9-89

27

Location

ST025

61893

110 Each 14.0000

Loc Qty

14

14

Loc Code

1

2

DAS  
33  
9-89

DAS  
106  
9-89

**MS21919-DG5** Clamp Purchased No

DAS  
27  
9-89

27

Location

ST321

122807

110 Each 35.0000

Loc Qty

35

35

Loc Code

2

2

61893  
12554  
654  
DAS  
33  
9-89

DAS  
106  
9-89

13-09-17

February-14-13 10:54:12 AM

Shop Packet Print

Page 2

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____ Part No. _____ NCR No. _____				<b>DISPOSITION</b> Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		<b>AGAINST DEPARTMENT/PROCESS</b> <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											

FAULT CATEGORY			
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other



# Picklist Print

February-14-13 10:54:12 AM

Page 3

Work Order ID: 97230

Parent Item: D119-696-013

Parent Item Name: Dual Cargo Mirror Installation

Start Date: 2/13/13

Required Date: 2/26/13

Start Qty: 2.00

Required Qty: 2.00

MS27039-1-09

Purchased

No

110

Each

322.0000

4

8

Screw

## Location

## Loc Qty

## Loc Code

FP001

80

18057

80

GA

50

111650

50

ST305

1

122814

1

ST508

191

124093

191

124093

MS35489-9

Purchased

No

110

Each

29.0000

1

2

Grommet

## Location

## Loc Qty

## Loc Code

ST289A

29

107376

29

107376

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____ Part No. _____ NCR No. _____				<b>DISPOSITION</b> Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		<b>AGAINST DEPARTMENT/PROCESS</b> <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
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FAULT CATEGORY				
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other	

# DART SERVICE INSTRUCTION

## TO AMEND INSTALLATION INSTRUCTIONS IIN-D119-696 REV. A AND INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D119-696 REV. 0

REF FAA STC: SR01043SE

REF TC LETTERS OF ACCEPTANCE: C-11-0119/-0120/-0121

REF EASA STC: EASA.IM.R.S.01551

### PURPOSE

This service instruction details the D119-696-011/-013 Cargo Mirror Installations at CHG 006 which have been improved with D4450-1/-043 Arm/Arm Assembly. The D4450-1/-043 replaces D3074-1/-3 and feature a more robust and ergonomic design. Customers/operators who wish to upgrade existing D119-696-011/-013 Cargo Mirror Installations at earlier change numbers may procure the DSI-9578-011/-013 Kit from Dart. The revised weight and balance and parts list on page 2 of this service instruction are to be used for D119-696-011/-013 Cargo Mirror Installations at CHG 006.

### INSTALLATION

#### Replacement of D3074-1 arm on D119-696-011 Single Mirror Installation:

1. Remove and discard existing D3074-1 Arm and existing D2057 Plug.
2. Install D4450-1 Arm and replacement D2057 Plug in accordance with Figure 1 of this service instruction.
3. Install D2011-101 Mirror to D4450-1 Arm using D3014-1 Locknut as shown in Figure 1 of this service instruction.

#### Replacement of D3074-3 Arm on D119-696-013 Dual Mirror Installation:

1. Remove and discard the existing D3074-3 Arm and associated parts/hardware. Note that the D3074-3 Arm also includes 2 X D2052 Brackets, 2 X D2055 Clamps, a D2056 Bellcrank, 2 X D2054 Bushings, and attaching hardware.
2. Install D4450-043 Arm Assembly in accordance with Figure 1 of this service instruction.
3. Install 2 X D2011-101 Mirrors to D4450-043 Arm Assembly using D3014-1 Locknuts as shown in Figure 1 of this service instruction.

### MAINTENANCE AND CONTINUED AIRWORTHINESS

Inspection requirements for D4450-1/-043 Arm are identical to D3074-1/-3 Arm they are replacing. Refer to ICA-D119-696.

### WEIGHT AND BALANCE

Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D119-696-011	2.3 lb	7.0 in	16.1 in-lb	22.0 in	50.6 in-lb
Cargo Mirror Installation (CHG 006)	1.04 kg	0.18 m	0.19 m-kg	0.56 m	0.58 m-kg
D119-696-013	3.2 lb	1.0 in	3.2 in-lb	22.0 in	70.4 in-lb
Cargo Mirror Installation (CHG 006)	1.45 kg	0.03 m	0.04 m-kg	0.56 m	0.81 m-kg

13-02-15  
NO. 97230 MCS  
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A	NEW ISSUE	MB	11.10.04
REV.		BY	DATE
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CHECKED		DRAWING NO.	REV. A
MFG. APPR.		DSI 9578	SHEET 1 OF 3
APPROVED		TITLE	SCALE
DE APPR.		MIRROR ARM UPGRADE	NTS
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# PARTS LIST

Qty -011	Qty -013	Qty -041	Qty -043	Part Number	Description
X				D119-696-011	SINGLE CARGO MIRROR INSTALLATION
	X			D119-696-013	DUAL CARGO MIRROR INSTALLATION
1		X		D119-696-041	SINGLE CARGO MIRROR ASSEMBLY
	1		X	D119-696-043	DUAL CARGO MIRROR ASSEMBLY
		1	2	D2011-101	MIRROR ASSEMBLY
1	1			D2053	BRACKET
		2	**2	D2054	BUSHING
		2	**2	D2055	CLAMP
		1	**1	D2056	BELL CRANK
		1		D2057	PLUG
1	1			D2067	CONNECTOR
1	1			D2071	CABLE ASSEMBLY
		*1	*2	D3014-1	LOCKNUT
		1	**1	D3072-1	BRACKET
		1	**1	D3072-2	BRACKET
1	1			D3083-1	PLACARD
		1		D4450-1	ARM (WAS D3074-1)
			1	D4450-043	ARM ASSEMBLY (WAS D3074-3)
4	4			AN526-1032R9	SCREW
4	4	6	**6	AN960JD10	WASHER
		*1	*2	AN960JD416L	WASHER
		3	**3	MS21042L3	NUT (or MS21042-3)
2	2			MS21919DG5	CLAMP
4	4			MS27039-1-09	SCREW
		3	**3	MS27039-1-18	SCREW
1	1			MS35489-9	GROMMET
2	2			AKS7-1032-130	INSERT (or ALS7-1032-130 or AKS4-1032-130 or ALS7-1032-130 or AELS-032-130)

\* INCLUDED AS PART OF D2011-101 MIRROR ASSEMBLY

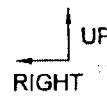
\*\* INCLUDED WITH D4450-043 ARM

Qty -011	Qty -013	Part Number	Description
X		DSI-9578-011	MIRROR ARM UPGRADE KIT (SINGLE CARGO MIRROR INSTALLATION)
	X	DSI-9578-013	MIRROR ARM UPGRADE KIT (DUAL CARGO MIRROR INSTALLATION)
	**2	D2054	BUSHING
	**2	D2055	CLAMP
	**1	D2056	BELL CRANK
1		D2057	PLUG
	**1	D3072-1	BRACKET
	**1	D3072-2	BRACKET
1		D4450-1	ARM
	1	D4450-043	ARM ASSEMBLY
	**6	AN960JD10	WASHER
	**3	MS21042L3	NUT (or MS21042-3)
	**3	MS27039-1-18	SCREW

\*\* INCLUDED WITH D4450-043 ARM

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### D119-696-011/-013 SINGLE/DUAL MIRROR INSTALLATION

**DART AEROSPACE USA, INC**  
KENT, WA

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DRAWING NO. REV. A  
DSI 9578 SHEET 3 OF 3

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**TITLE** SCALE  
**MIRROR ARM UPGRADE** NTS

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# PARTS LIST

Qty -011	Qty -013	Qty -041	Qty -043	Part Number	Description
X				D119-696-011	SINGLE CARGO MIRROR INSTALLATION
	X			D119-696-013	DUAL CARGO MIRROR INSTALLATION
1		X		D119-696-041	SINGLE CARGO MIRROR ASSEMBLY
	1		X	D119-696-043	DUAL CARGO MIRROR ASSEMBLY
		1	2	D2011-101	MIRROR ASSEMBLY
1	1			D2053	BRACKET
		2	**2	D2054	BUSHING
		2	**2	D2055	CLAMP
		1	**1	D2056	BELL CRANK
		1		D2057	PLUG
1	1			D2067	CONNECTOR
1	1			D2071	CABLE ASSEMBLY
		*1	*2	D3014-1	LOCKNUT
		1	**1	D3072-1	BRACKET
		1	**1	D3072-2	BRACKET
1	1			D3083-1	PLACARD
		1		D4450-1	ARM (WAS D3074-1)
			1	D4450-043	ARM ASSEMBLY (WAS D3074-3)
4	4			AN526-1032R9	SCREW
4	4	6	**6	AN960JD10	WASHER
		*1	*2	AN960JD416L	WASHER
		3	**3	MS21042L3	NUT (or MS21042-3)
2	2			MS21919DG5	CLAMP
4	4			MS27039-1-09	SCREW
		3	**3	MS27039-1-18	SCREW
1	1			MS35489-9	GROMMET
2	2			AKS7-1032-130	INSERT (or ALS7-1032-130 or AKS4-1032-130 or ALS7-1032-130 or AELS-032-130)

\* INCLUDED AS PART OF D2011-101 MIRROR ASSEMBLY

\*\* INCLUDED WITH D4450-043 ARM

Qty -011	Qty -013	Part Number	Description
X		DSI-9578-011	MIRROR ARM UPGRADE KIT (SINGLE CARGO MIRROR INSTALLATION)
	X	DSI-9578-013	MIRROR ARM UPGRADE KIT (DUAL CARGO MIRROR INSTALLATION)
	**2	D2054	BUSHING
	**2	D2055	CLAMP
	**1	D2056	BELL CRANK
1		D2057	PLUG
	**1	D3072-1	BRACKET
	**1	D3072-2	BRACKET
1		D4450-1	ARM
	1	D4450-043	ARM ASSEMBLY
	**6	AN960JD10	WASHER
	**3	MS21042L3	NUT (or MS21042-3)
	**3	MS27039-1-18	SCREW

\*\* INCLUDED WITH D4450-043 ARM

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REFERENCE ONLY

DAS  
27  
9-89

## 4. WEIGHT AND BALANCE

Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D119-696-011	2.2 lb	7.0 in	15.4 in-lb	22.0 in	48.4 in-lb
Cargo Mirror Installation	1.00 kg	0.28 m	0.28 m-kg	0.87 m	0.87 m-kg
D119-696-013	3.0 lb	1.0 in	3.0 in-lb	22.0 in	66.0 in-lb
Cargo Mirror Installation	1.36 kg	0.04 m	0.05 m-kg	0.87 m	1.18 m-kg

## 5. PARTS LIST

Qty -011	Qty -013	Qty -041	Qty -043	Part Number	Description
X				D119-696-011	SINGLE CARGO MIRROR INSTALLATION
	X			D119-696-013	DUAL CARGO MIRROR INSTALLATION
1		X		D119-696-041	SINGLE CARGO MIRROR ASSEMBLY
	1		X	D119-696-043	DUAL CARGO MIRROR ASSEMBLY
		1	2	D2011-101	MIRROR ASSEMBLY
1	1			D2053	BRACKET
		2	2	D2054	BUSHING
		2	2	D2055	CLAMP
		1	1	D2056	BELL CRANK
		1		D2057	PLUG
1	1			D2067	CONNECTOR
1	1			D2071	CABLE ASSEMBLY
		1	2	*D3014-1	LOCKNUT
		1	1	D3072-1	BRACKET
		1	1	D3072-2	BRACKET
		1		D3074-1	ARM
			1	D3074-3	ARM
1	1			D3083-1	PLACARD
4	4			AN526-1032R9	SCREW
4	4	6	6	AN960JD10	WASHER
		1	2	*AN960JD416L	WASHER
		3	3	MS21042L3	NUT (or MS21042-3)
2	2			MS21919DG5	CLAMP
4	4			MS27039-1-09	SCREW
		3	3	MS27039-1-18	SCREW
1	1			MS35489-9	GROMMET
2	2			AKS7-1032-130	INSERT (or ALS7-1032-130 or AKS4-1032-130 or ALS7-1032-130 or AELS-032-130)

\*INCLUDED AS PART OF D2011-101 MIRROR ASSEMBLY

